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1 Overview

1.1 Introduction
The purpose of this report is to inform the Partnership of the current initiatives relating to rail freight that are in progress in the region since the baseline assessment report in 2007. It is important to give consideration to the national perspective on funding and enhancements to rail loading gauge. These are discussed in the following chapters.

The report identifies current initiatives, but also take into account the current campaigns and aspirations, with pressure growing on the government to review its original decision to invest in schemes other than the agreed Boldon East Curve in Tyne and Wear. There are campaigns in progress to re-open the Leamside Line (Chapter 3, section 6) to passenger and freight traffic and the Ashington, Blyth and Tyne Line (Chapter 3 section 3) to passenger services with increased provision for freight traffic.

1.2 2007 Baseline Assessment - Summary of Findings
The scope for increasing the volume of rail freight moved in Tyne and Wear may be constrained by the shortage of available paths on the East Coast Main Line (ECML) in the future but in Network Rail’s view there is some spare capacity as illustrated by the fact that extra slots were found during periods of disruption to the WCML or Settle and Carlisle lines.

These issues are addressed by the Network Rail Freight Route Utilisation Study (RUS), which was published in March 2007. The RUS brings together all of the key strategic issues facing the future of rail freight and identifies a strategy for accommodating growth and changes in current demand on the network. The strategy has been developed with the involvement of the freight operators and other key industry players.

With respect to capacity issues, Tyne Yard – Tursdale junction is identified as a significant constraint in the RUS with respect to rail freight. Re-activation of the Boldon East Curve is recommended as the best option for addressing this. This will simplify access to and from the Port of Tyne, providing an alternative route to/from the Aire/Trent Valley via the Durham Coast. It also offers an alternative route from the Port of Tyne to the constrained part of the East Coast Main Line between King Edward Bridge and Ferryhill.

The RUS suggests that the short/medium term recommendations (including the Boldon East Curve) will be sufficient to handle the industry’s 2014/15 base case demand for the east coast ports. If further growth takes place beyond the industry forecast for the Port of Tyne and more generally the ECML from Ferryhill and Newcastle, the RUS states that it may be sensible to look again at the re-opening of the Leamside line for freight traffic. At present it is considered that freight traffic alone would not support the necessary investment, but that the route should be protected.

It is likely that potential additional trains would consist of more coal, intermodal and aggregates. These are the types of commodity that are growing in volumes across the national rail network. Certain retailers are experimenting with running intermodal freight trains as part of their supply chains and if reliability remains high then this type of traffic could be expanded. There is potential for additional port related traffic both from Tyneside and Teesport to run through the area as both ports look to expand volumes.

Key findings from this baseline assessment can be summarised as follows:

- The majority of rail freight movements in Tyne and Wear pass through Tyne Yard.
- Recent rail freight timetables record 307 train movements per week through Tyne Yard, with 51% taking place at night and 49% during the day (07:00 - 19:00).
- 85% of the weekly total of freight trains operate between Monday and Friday
- Approximately 32 freight trains run in both directions on a weekday.
- There are 40 freight train paths in each direction on a weekday.
52% of loaded freight trains are carrying imported coal. This follows the curtailment of coal exports from the port in 1998 and coal imports commencing in 2004. 1.6 million Tonnes of coal were imported in 2006 and this is expected to grow to 2.5 million tonnes in 2007.

Coal is moved from the Port of Tyne and a number of places in Scotland, including Inverkeithing, Knockshinnick, Millerhill and Mossend.

Coal is primarily moved to power stations in Teesside, South Yorkshire and the Midlands.

Other significant movements include Petrochemical (12 per week) and Steel (9 per week), Automotive (9 per week) and Enterprise (8 per week).

Oil and Petroleum is delivered to Jarrow from Lindsey in Humberside.

Aluminium is moved from Lynemouth Smelter in Northumberland to the ECML for onward shipment north and south.

1.3 Government Policy

The aim of the government is to see goods being moved in a sustainable way, increasing the benefits to the economy and to society. The mode shift will reduce road congestion, improve air quality through reduced carbon emissions and improve road safety by reducing the quantity of lorry journey miles on the strategic route network. This is to be assisted by the introduction of the freight grant schemes (mode shifts). The schemes will assist in funding the additional costs between road and varying forms of transport such as rail, water and road freight. The provision of the grant should not discourage genuine competition but provide a way to achieve the reduced carbon footprint target, reduce congestion and improve safety in encouraging the transfer of freight from the road to rail. However the extent of modal shift will relate directly on the availability of current rail links in the region.

Road and rail can work together and complement each other to give a greater choice to the customer. At a time when the UK ports are handling increasing volumes of cargo, the road and rail infrastructure are struggling to cope with the resulting capacity issues.

A campaign to increase the length of lorries was not accepted as being a sustainable way forward for road freight. A statement by Ruth Kelly (former Transport Secretary) in June 2008 stated that the longer heavier lorries would not be on a future plan for British roads. There is a risk (substantial in the case of 60 tonne super-lorries) of increased CO2 emissions and other environmental drawbacks due to modal shift from rail to road if these vehicles were to be permitted, which would also impact on the viability of existing rail freight services and the potential for future growth.

It was also considered that there could be serious implications for the management of the road network as such vehicles would be unsuitable for many roads and junctions. Substantial public sector subsidy would be needed to provide for junction improvements including, the protection of bridge supports, and the provision of parking infrastructure for statutory rest periods, particularly if a new nationwide network of dedicated facilities is required. There is also uncertainty about how efficiently such vehicles could be used, particularly when sourcing loads of sufficient size to make return journeys sustainable. Such vehicles would introduce new safety risks.

An additional statement said that small increases in length may be a consideration. Asda supply chain said that an extra metre on the length of a trailer would increase the load by two pallets, reducing 200 road miles per year for each trailer. This assumes that the trailer would be full to capacity for the whole of its journey.

1.4 Funding

Recognition of the freight services provided by road in comparison to rail came in November 2006 when the Department for Transport (DfT) announced the launch of the Freight Facilities Grant (totalling more than £132m). For schemes to be funded they needed to be rated in the ‘high value for money’ category. The announcement showed that the DfT were investing in the infrastructure for rail. The then Transport Minister Tom Harris stated: “The improved infrastructure we are funding will make a significant contribution to reducing road congestion, carbon and environmental emission, as well as supporting the future growth of our economy, in this way everyone wins.” “This funding is on top of the £65m the DfT announced earlier this year to support freight through upgrading infrastructure and secure greener ways of moving the nation’s goods. Together, these awards underline the Department’s commitment to improving the rail freight network in this country.”
The Freight Rail Utilisation Strategy (RUS) and a subsequent white paper forecasted there would be a 30% increase in tonnage carried between 2005 and 2015. It is difficult to predict levels of future tonnage with the current credit situation in the UK, which is still ongoing. However operators and the business sector in imports and export know the market they trade in and predict in an informed way, any expected volumes. The funding will allow the rail freight services to carry the increase in volume and size of containers which are now 9’ 6” high on flat bed wagons. A further boost to the industry was announced by the Transport Minister (Jim Fitzpatrick) on the 11th September 2008. An additional £67m was to be made available through the Sustainable Distribution Fund, Freight Facilities Grant (FFG). The money will be targeted at increasing other non road modes such as water and rail, reducing the number of lorry movements by 1 million each year. James Fitzpatrick said:

“This £67m is a vote of confidence in the freight industry. As more freight is transported by rail and water it will bring clear benefits for the economy, the environment and other road users”.

“Today’s announcement demonstrates that investing in improved rail freight infrastructure is good for the national economy as well as offering real benefits to rail freight users and operators. It shows the success of the industry working together and with public sector bodies; both government and regional agencies, to identify and deliver products that demonstrate value for money. It follows on from the well organised Freight Route Utilisation Study work. We look forward to continuing these partnerships and building on this success to develop a Strategic Rail Freight network to unlock the full economic potential of rail freight in Britain.”

1.5 Container Rolling Stock

Changes in the size of containers have created a number of implications for the rail infrastructure, leading to effective improvements to the development of the network or introducing new rolling stock designed specifically for the larger containers.

The flat wagon (with a platform of 60ft); give the option to mount a 20ft and a 40ft container. However with the introduction of the 9’ 6” container the total height is above the arch height of the Victorian Bridges and tunnels on the infrastructure. Investment to enhance the loading gauge is, therefore required to allow the movement.

- The latest generation of design is shown in (Photo 1), but is still to be approved for commercial use.
- It is a permanently coupled low wagon maximising the dead space found in older types of low wagon, four wagons of this type could be added to a train.

In 2002, 45 foot long containers were introduced. These employ standard ISO lifting fittings but they are not technically a standard ISO container and the ships utilised to carry them require non-standard container bays. In spite of this they have seen increasing acceptance and are regularly shipped to the UK. This is interesting bearing in mind that the original Freightliner boxes were either twenty feet or twenty seven feet long because it was felt that a thirty foot long container would be too long for comfortable use on British roads. Major schemes will be required to adjust the loading gauge to accommodate the flat bed wagon and new size container. Enhancement works would also be required to accommodate these non standard containers on the railway.

Other alternatives to this major work will be to utilise:

- Bogies with smaller wheels consequently reducing the height of the gauge.
- Lowered platforms, called Pocket Wagons are the preferred option, but unfortunately the flexibility of this type of wagon is limited as the length of the bogie pocket is 40ft, therefore two 20 ft containers cannot be fitted into the pocket due to physical external measurements.
Photograph 1 - Davis Super Low 45 (RFG News Dec 08)
2 National Rail Assessment

Figure 1 – National Rail map of routes excluding freight only routes
2.1 Introduction

It was proposed in 2006 that the DfT Transport Innovation (Productivity) funding (TIF) should be used for four national projects. Three were in the areas of Southampton, the Nuneaton corridor, North West of England West Coast Mainline (WCML). The fourth is specifically for the Humber Ports and the East Coast Main Line (ECML). This chapter gives a brief overview of these schemes. The awards will improve freight infrastructure on the four specific projects across the country and reduce dependency on road transport. The schemes are forecasted to remove 300,000 lorry journeys from the roads every year.

As mentioned previously in Chapter 1, the funding was to assist in taking freight off the road by moving to rail and water and to enable the upgrade of the loading gauge to allow the new cube containers to be moved effectively around the UK. At the point of use, rail and water can be more expensive than road transport, but the wider benefits for the environment outweigh this with the FFG offsetting the cost. A plan showing an overview of the passenger rail network can be seen in (Fig 1).

2.2 Humber

In 2006 the Transport Innovation Fund (TIF 2007) allocated £8m of funds to the ports south of the Humber and the ECML to increase capacity in supplying coal to the power stations in the Aire and Trent Valleys. A total investment of £23m to Humberside rail in 2007 increased the number of trains by five times on the Brigg line and Hull Docks branch. The upgrade included new signalling, strengthening works on bridges and line speed to the Hull Docks line, and opening the Brigg line to 16 hours a day operation.

A Freight Facilities Grant has also been allocated to assist the mode shift emphasis from road to inland waterways.

2.3 Southampton

Southampton handles approximately a 28 per cent share of the container traffic coming into the UK, with the potential increase to 40 per cent if the gauge enhancements take place between Southampton and the West Midlands. The Port is the UK’s second largest container port and to maintain growth it is important to upgrade the loading gauge to allow the additional increases in container traffic away from the port.

The £43m of funding from the (TIF 2007) will facilitate the gauge enhancement to enable the movement of the larger containers on the rail freight route from Southampton Port to the West Coast Mainline in the Midlands through Nuneaton. There are reportedly a total of 48 structures to be upgraded connecting Southampton with Birmingham. The enhancement is expected to be completed by 2010.

2.4 London

The DfT announced £18.5m of TIF (2006) for the Gospel Oak to Barking line in July this year. The boost will be complemented by £16.5m from Network Rail, which will also carry out the upgrade work. The upgrade to the track will enable new, larger, freight containers from ports in the South East to be carried more easily on the cross-London route, reducing freight lorries on London's roads. It will give greater flexibility to freight traffic while supplying the construction sites for the London 2012 Olympic Games.

2.5 Nuneaton Chord

The £80m of TIF funding for the Peterborough-Nuneaton route will fund enhancement works to clear the line to W10 gauge. The scheme will include the rebuilding of 10 bridges plus alterations to Stamford Station. This will enable the route to carry 9ft 6" high containers on flat bed wagons. The scheme will improve access to Felixstowe port and provide an alternative route to the West Coast Main Line, bypassing London. The scheme also provides funding for a new east to north chord at Nuneaton, allowing trains to continue northwards without conflicting with the West Coast Main Line, subject to legal consent. The scheme will also receive £5m from Network Rail and £1m from East of England Regional Development Agency.

The improvements will increase the capacity by 10 freight trains each day in both directions. There are further investments planned from Ipswich to Peterborough of £120m which will open the line from Ipswich to Nuneaton to W10 gauge. The work is expected to start in 2009 and be completed in 2010.
2.6 North West
A decision was made, to not award a FFG grant to the North West for intermodal terminals, reflecting the current competitiveness by the industries in the North West. The competitiveness in the intermodal sector is increasing between the freight and terminal operators who are currently very active in the market-place, with at least three separate companies operating terminals in the North West, competing in the not yet buoyant market. The following are two of the largest:

- Stobart, Runcorn.
- Potter Group, Knowsley.

There are plans to develop two new rail freight terminals at the Port of Salford and at Parkside, which will be developed without public sector support. Astral Developments, has made an application to develop an old colliery site into one of the largest rail terminals in the UK, Parkside Terminal, Warrington (See Fig 2). If there are no objections to the scheme, then the terminal could be operational by 2010. Previously in 2006 the TIF allocated £1.7m to improve and give direct access to the (WCML) from the Liverpool Docks, the fund was to reinstate a new section of track and enhance the loading gauge on two rail routes.

![Figure 2 - Proposed Parkside Terminal](image)

The loading gauge enhancement scheme for two routes from the Port of Liverpool to the West Coast Main Line include the re-installation of the 300 metre Mount Olive Chord (See Photo 2), in addition to works on the branch to Liverpool docks. Contributions are being made with, £3.82m from Network Rail, £3.6m from Regional Development Agencies (Northern Way and ERDF), £2m from Merseytravel and £0.75m from Peel Holdings.
Photograph 2 – Olive Mount Chord
3 Regional Rail Assessment

3.1 Introduction
In this section the report discusses the five routes making up the infrastructure of the North East rail network. Four of the main routes are still in use, with a fifth unused line to Tursdale and Ferryhill in County Durham from Pelaw in Tyne and Wear. In this regional section we will also discuss the Teesside line due to the increased volume from the Teesport, where Asda have recently opened a rail terminal. We also discuss the enhanced loading gauge work for the movement of 9’ 6” high containers.

The first line to be discussed is that part of the ECML between Newcastle to Morpeth (ECML) which carries freight and passenger trains from the south up to Scotland. The second line is the Ashington, Blyth and Tyne line commonly called the ABT where Northumberland County Council and Nexus have commissioned a study into passenger rail connectivity between the South East of Northumberland and Tyne and Wear. The third is the Newcastle to Carlisle line, which carries freight and passenger trains to and from Cumbria and the west coast of Scotland see (Fig 4). Fourth is the Durham Coast line from Newcastle to Northallerton, which runs through Sunderland, past Yarm, Hartlepool, Saltburn, Stockton, Redcar, Middlesbrough and Darlington. Recently a service to London was introduced to the line from Sunderland, which is discussed in Chapter 4.

The fifth line, though currently unused, is commonly known as the Leamside Line which runs from Pelaw in Tyne and Wear through to Tursdale and Ferryhill in County Durham (See Fig 5). This line runs for 21 miles. A number of organisations and local MPs are campaigning for the Leamside line to bring quicker links between Tyneside and Teesside. The Passenger Transport Authority (PTA) chairman recently said: “the Leamside line is a neglected asset for the whole region and is the missing link offering a new, faster rail route between Tyne, Wear and Tees that would boost the whole economy. “It would also provide rail access to Washington and the former coalfield of Sunderland. A major benefit would be a new park and ride station at Belmont near Durham, ideally placed to take traffic off the A1, a real congestion buster. We have to be a forward looking region with practical solutions to make our transport network better. If everyone works together, then it may be possible for things to happen.”

3.2 Newcastle to Morpeth (ECML)
A frequent service of the East Coast and Cross Country passenger trains operates between Newcastle and Edinburgh on the ECML, some of which call at Morpeth. Morpeth is also served by an hourly local train from Newcastle. Freight trains also operate on this route, the main goods carried being coal, cement, automotive goods, enterprise traffic, bauxite and aluminium.

Northumberland County Council is currently studying the feasibility of making use of the ABT line in order to improve connectivity between the county and Tyne and Wear. The study includes the potential benefits of extending the current Newcastle Morpeth local service on to Bedlington via Choppington. The would require a station, crossing and signalling upgrade, estimated at a cost some £5m

3.3 Ashington Blyth and Tyne Line (ABT)
The ABT (Fig 3) redevelopment of the line will be hampered by the section of rail line stretching from Benton Junction to Newsham in Blyth, which is single track, as is the section from Bedlington to Morpeth. A decision will have to be made on whether to upgrade the track to double track in order that the increased rail paths could be achieved. The track is suitable for heavy haul trains and is maintained to that standard, due to trains from Alcan taking Aluminium ingots from Lynemouth.
There are currently some signalling and capacity issues in the Blyth and Tyne network. This is due in part to the line being single track in certain areas, which will be upgraded with the development of the power station by National Power started a grade 3 study but did not complete it. Instead a timetabling study is expected to be submitted by March 2009. The port is well served by a direct link to the rail network.

Currently the ships sailing into the north port service Alcan and its power station with coal and bulk Alumina powder. The additional capacity required to supply the power station with coal is not available due to the Port of Blyth increasingly being seen as a key facility for modal shift to sea freight. Other cargoes include metals handling with slab, ingots, coil, plate, sheet piling and pipes all well serviced. A wide variety of other bulk cargoes are also accommodated in the port spread over several terminals including bagged cargoes such as fertiliser and wastes.

The new power station has been proposed as a viable site to build a new coal powered power station at an estimated cost of £2b. In the eventuality that the power station becomes a reality, it will bring additional industry to supply the power station other than coal, which would increase the required resource levels. It is assumed that people will commute to Blyth from around the region. The most energy efficient mode of passenger transport to Blyth would be by rail, however the geographical area of Blyth means it could be serviced by all aspects of public transport. Planners must take into consideration current pinch points on the road network, factoring in the use of rail to ease congestion, whilst increasing connectivity to other parts of the region.

Blyth Power Station is expected to be in operation by 2014/15 and the Port of Blyth is proposed to supply 40% of the fuel. The reason for it not supplying a greater proportion is due to a capacity issue where larger ships need deeper berths which the Port of Blyth cannot offer. The coal will be transported from the berths at Blyth to the power station on a conveyor belt system over the current warehousing. The remaining 60% of coal supply will be transported by rail from Hunterston and Port of Tyne and local opencast sites. This will undoubtedly add to the already near capacity East Coast Main Line (ECML).

Recently the South East Northumberland Rail Users Group (SENRUG) has set up a campaign to re-open the line to passenger trains. The line is fully maintained as coal trains run to Alcan and Lynemouth power station from Widdrington open cast coal field. Bauxite is transported by rail from Blyth Harbour to Fort William. Alumina bulk is transport by rail from Blyth North Harbour to Alcon in specially designed rail wagons to the Lynemouth, Lochaber and Kinlochleven smelters. Aluminium ingots are transported out of Alcon to the Midlands and sometimes to South Wales.

The highest utilisation on the line is the section from Blyth port to the Alcan Smelter in Lynemouth. The majority of the line is double track, however a small section of about 8 miles is single track starting after Benton Station to Newsham in Blyth and similar for the small section from Bedlington to Morpeth. The branch from the ECML at Benton, runs parallel to the metro line to Northumberland Park where it turns north up to the Newsham junction. The line has a branch to the Bates Shipping (South Harbour at Blyth). The line continues to the Bedlington south and north junction where the branch to Morpeth goes off via Hepscott Junction and the ECML, via North Curve and Morpeth station. The goes on to West Sleekburn where a branch goes off toward Cambois and North Blyth toward Ashington. At Ashington the line splits again to Lynemouth and Linton Colliery, and Butterwell Opencast via Linton and the ECML.
Figure 3 - Ashington, Blyth and Tyne Line
Since the line closed to regular passenger services 40 years ago, only freight trains and occasional diverted or passenger charter trains have used the line. However it has long been an aspiration of Northumberland County Council, the other Local Authorities in the area and passenger groups in the region to reintroduce passenger services to the ABT network. On 7th June 2008 three charter trains were run, championed by the South East Northumberland Rail Users Group (SENRUG) it was hoped that the success of these charter trains would demonstrate that a regular service would open up access and give economic benefits across southeast Northumberland.

Councils are working in partnership with Network Rail and others on a feasibility study, including a business case for the re-opening of the network to passenger services (See Fig 3. It is understood that the scheme forms the core of the “South East Northumberland Public Transport Corridor.” Bid included as a provisional Priority in the current round of Regional Funding Advice to Government. The indicative cost of the project is £35m and the region intends to take the scheme forward through negotiations with the DfT.

3.4 Newcastle to Carlisle Line
This line provides connectivity between east and west but unfortunately the reduced loading gauge restricts the movement of new large cube containers along the line. If gauge enhancement was commissioned it would create an additional available diversionary route in the north. It would help in reducing stoppage time, in the event of a rail track being down on either the East or West Coast Mainline. The main rail freight industry utilising this line is coal wagons from Mossend and Port of Tyne. There are some 14 Passenger trains a day each way between Newcastle and Carlisle, with a further 14 each way between Newcastle and Hexham; additional trains operate between Newcastle and the MetroCentre. Freight trains account for another 17 trains each way each day.

3.5 Sunderland to London (Kings Cross)
There is an hourly passenger service along the Durham Coast route, linking Hexham, Newcastle Sunderland, Hartlepool and Middlesbrough. Freight train service Seaham Harbour and the nuclear waste train operates between Hartlepool nuclear power station and Sellafield in Cumbria using the Durham Coast and Tyne Valley lines. Coal trains now operate frequently south from the port of Tyne along the Durham Coast route to the Yorkshire power stations; until the Boldon East Curve is re-instated (See 1.2) this operation involves a time consuming train reversal.

Grand Central was given approval by the office of Rail Regulation (ORR) in July 2006 to run three trains daily each way from Sunderland to London Kings Cross. The route is along the Durham Coast and then the Tees Valley to the ECML at Northallerton before continuing along the ECML to York and London. The stations served are Sunderland, Hartlepool, Eaglescliffe, Northallerton, Thirsk York and London Kings Cross. The service fills an obvious gap in the provision for access to York and London and is already receiving popular support. There are trains both ways early in the morning, around noon and in the evening peak; the ORR have recently given permission for a fourth train pair which is expected to provide services from Sunderland at around 09:00 and from London at around 19:00.

3.6 Leamside Line
In 1991 the Leamside line was closed. The line runs for 21 miles, providing connectivity from Tursdale in Durham to Pelaw in Tyne and Wear, then onto Newcastle. The line passes major industrial zones like, Belmont in Durham, and in Tyne and Wear, Rainton Bridge, Follingsby Park and is close to the Nissan Car plant (See fig 5).
Figure 4 – Leamside Line
One of the benefits of re-opening the Leamside Line will be enhanced transport links to Washington which as well as a new town, is also a major commercial area for industry. It could progressively shift to other modal transport which assists in more sustainable transport, and encourage new businesses to the area. The Freight RUS argues that the line should not be re-opened as the forecasted figures show that the ECML until 2026 is capable of accommodating the predicted growth of 6%.

The longer term scenario from the February 2008 East Coast Mainline Route Utilisation Strategy states that

‘By 2036, the unpredictability of traffic patterns becomes a real difficulty, particularly for ESI flows (see Section 5.7.1), though with gauge clearance to W10 or larger north of Doncaster intermodal growth is likely to be significant. Between Colton Junction and Northallerton the route is four-track so capacity is not expected to be a problem except perhaps at Skelton Bridge Junction where remodelling might be necessary. Running additional passenger services north of Northallerton by 2036 would probably require enhancement and increased use of the parallel route via Eaglescliffe, Stockton and Ferryhill. It would also require reinstatement of the Leamside route (Ferryhill – Washington – Pelaw Junction) might be beneficial to provide sufficient overall capacity between Ferryhill and Newcastle. Both routes would need to allow intermodal freights to run at 75mph and have the necessary gauge clearance’.

It may be that in time the growth of the Nissan car plant would generate additional traffic to re-evaluate the situation. Some of the benefits are outlined in the report of which include:

- Cutting train travel from Middlesbrough to Newcastle to less than 1 hour.
- Linking city regions that together make up the fourth largest conurbation in the UK.
- Bring rail to Washington for the first time.
- Create park and ride options to relieve the over congested A1 and A19.
- A relief route for the ECML to allow build up capacity for freight and passenger traffic.
- Substantial economic benefits for employers along the route due to easier access allowing increased employment, and access to the ECML freight flows.
- Relieve commuter overcrowding on the busiest section of the ECML.

A study in 2008 was commissioned by a partnership of, Nexus, One North East, Durham County Council, Sunderland City Council, the North East Assembly and the association of North East Councils to understand the benefits of reinstating the line to ease congestion on the ECML. The study, carried out by Faber Maunsell, also shows the potential for local passenger trains between Durham, Washington and Newcastle.

A campaign has been launched by the Tyne and Wear Passenger Transport Authority for the re-introduction of rail services as a feasible alternative to the ECML. The estimated cost of £50-65 million includes the minimum cost to upgrade the existing line via Ferryhill and Stillington to Stockton and Middlesbrough.

The report identifies locations to site alternative stations along the route. Implementation of all of these would be a bonus, however if only a few were opened, there would be benefits gained for the town and industry. The Leamside line is shown in Figure 5.

A primary use of the line would to improve the connectivity between the Tees Valley and Tyne and Wear City regions. However, use of the line by local passenger trains, freight services and ECML trains diverted to facilitate maintenance or service continuity would also be accommodated, bringing greater utilisation and efficiency.

The study shows that the re-opening would generate significant wider economic benefits. Additional funding would need to be sourced to meet the capital costs of the project, as there is currently little prospect of central government funding. The line is still in part available for enhancement, but only 80% of the infrastructure remains. A major part of the works would be infrastructure and structures work including the 135ft Victoria Viaduct north of Penshaw before the structures decline any further (See Photo 3)
A more detailed study of the Leamside Line is provided in the Nexus report submitted in November 2007 by Faber Maunsell:

The report looked at three options:

- Option 1: reinstating the line from Pelaw Junction as far as a proposed ‘parkway’ type station on the outskirts of Durham at Belmont
- Option 2: reinstating the line throughout together with upgrading of the ‘Stillington’ line between Ferryhill and Norton South Junction near Stockton.
- Option 3: as Option 2 plus additional fast to slow line crossovers at Ferryhill to allow more efficient use of the line by high speed trains, and more flexibility in operation in the Ferryhill area.

It was seen that none of the options had a strong business case although Option 2 performs more strongly than either Option 1 or Option 3. This appears to be because:

- Revenues to/from the Middlesbrough direction from Tyne Tees services and Park & Ride are significant but not captured by Option 1
- Option 3 includes additional infrastructure for diverting mainline trains off the ECML onto the Leamside Line, but there is no additional revenue included to pay for it.

It was recommended that ‘Low Cost’ options be taken forward for further development and analysis.
3.7 Teesside
The Tees Valley is a major generator of rail freight traffic, not least from the steel works and potash mines. The line between Middlesbrough and Saltburn provides a commuter link with Middlesbrough Whitby service providing a strategic connectivity for the Esk Valley.

PD Ports are asking the Government to make multi million pound improvements to the East Coast Mainline. In the meantime, it is gathering support for a more modest investment (partially private financed) in a freight rail link from the port to the national network. Tesco have recently opened a super warehouse and are the second retailer to locate in the region following Asda.

The Northern Gateway project to develop a deep sea container port has been approved by the Government and Teesport expect that it will open in 2011/12. The £300m port is projected to generate 10 new rail freight services travelling to and from the port each day, ferrying goods to Scotland, the North-west and Yorkshire.

Martyn Pellew of PD Ports said:

“The project is being manned up and getting ready to let contracts,” said Mr Pellew. “It’s going to be two years in construction, but by that time we would like to see at least two extra trains, possibly to Scotland and Yorkshire. The East Coast Mainline will not be ready. They (the Department of Transport) are already planning beyond 2014 and we are not in it.

“We have got to get this department going. We are trying to get on their shopping list. We want to see the Government recognise that what’s important is to get railways viable and productive on the shorter routes.”

The port wants to change the accepted way of thinking on the optimum length of journeys by rail for freight. The port’s anticipated distribution area is 70 miles to Leeds, 40 miles to Newcastle and 120 miles to Manchester.

According to a recent Network Rail report commissioned by the port, the least costly route from the port to the mainline would be via Darlington, at £3.5m. Tesco and Asda could invest in the line which would take the shortest route to the ECML through Darlington. In December 2008 PD Ports commenced running a daily service from Teesside to Mossend Scotland, transporting high cube containers. This has been achieved by the enhancement of the gauge in places and running trains slowly under difficult structures. The reduction in lorry journeys will be significant together with costs through utilising rail instead of road. There are limitations to the service due to speed through known congestion areas and having to use special drop level wagons or small bogie wheels to negotiate the gauge restrictions. Future development of the line would need to include gauge enhancement.
4 Local Assessment

4.1 Introduction
The Tyne and Wear Freight Partnership was originally set up to facilitate the efficient and sustainable movement of goods throughout the region. Although road congestion is not a major issue in the majority of the region, anecdotal and survey evidence suggests that the A1 Western by-pass is over capacity around peak times. However in the current economic climate, where fuel costs have increased over the last two years, it is important to find alternatives modes of transport for both the public and freight. New forms of connectivity are vital to the regeneration of the area, through utilisation of other modes of transport. There are a number of options that could be investigated to take the traffic away from the roads but for this report we concentrate on rail.

Normal freight trains carrying cargo such as, coal, petroleum, cars, and other bulk materials are not restricted by the current gauge. However if the region is to develop into containers the current gauge cannot accommodate efficiently the 9’ 6” high containers which are a major part of the container industry movement.

In this section we will be looking into rail transport as the alternative to road.

4.2 Port of Tyne
The increased imports of international coal into the Port of Tyne, has resulted in a significant redevelopment of the port facilities to successfully handle the increasing tonnage. In 2007 2m tonnes of coal were handled by the port, imported from China, Poland and lately Russia. In December thirteen trains in one day left the port within a 24 hour period. In 2008 the port has increased its volume and handled 16%, 165 more than in the same period in 2007, an increase of approximately 240% from 2006.

Improvements to the Boldon East Curve will allow easier access to the Durham coastal line to Northallerton, subsequently increasing the available paths open to the port. The DfT in the Network Rail Freight RUS (March 2007) acknowledged that the curve needed to be reinstated to allow development of the area and to enable additional rail paths to the Port of Tyne, Network Rail currently expect to complete this work in 2011. Nexus have expressed reservations relating to the Bolton East Curve as the proposal has the potential to cause delay to Metro operations between Sunderland and Pelaw. The Leamside line offers a more sustainable long-term solution for this freight traffic. Should the Boldon East Curve proposal be implemented, it is recommended that northbound freight trains into the Port be routed via Pelaw and Brockley Whins junction wherever possible, to minimise delays to other services.

The Rail Freight Baseline Assessment report submitted to the Tyne and Wear Partnership in April 2007 detailed the plans for the curve.

The line from the Port of Tyne, to the ECML via Gateshead (King Edward Bridge) was upgraded in August 2008 to cope with the increasing number of containers shipped into the port. The loading gauge has now been cleared for 9’ 6”containers from the Port of Tyne to the ECML at King Edward bridge junctions, an upgrade that allows operations to be reduced in time and kilometers. The main impact for the environment will be the reduction in the number of lorries required to transport the containers.
5 Conclusions

5.1 Introduction
The conclusions of this report cover the implications of developments in rail freight at a national and regional level. Some of the issues covered by the report have a relatively peripheral impact on Tyne and Wear. However it is important to acknowledge that local issues have implications beyond the local network.

5.2 Leamside Line
Re-activation of this line would be effective in addressing capacity issues for passenger services on the ECML. There would be additional benefits to freight, particularly in relation to the Port of Tyne and potentially Nissan (when it expands). The line would subsequently open up connectivity to Teesside from Tyne and Wear, minimising journey times. The line is currently out of use consequently the infrastructure has deteriorated substantially. Opening up a small number of stations would benefit road users by reducing congestion and carbon emissions in the environment, resulting from fewer kilometres being travelled by car (see Photo 4).

If freight trains were to run on the line, then this would open a trade corridor to the estates in Washington and Follingsby for Nissan. This has the potential to reduce the kilometres travelled and reduce the number of lorries on the A19 and A1.

Photograph 4 - Single track over Victoria Viaduct

In the November 2007 report (submitted by Faber Maunsell) it is stated that Nexus and the other stakeholders wish to protect the reopening potential of the line and the remaining infrastructure should be left intact. It recommended that the case for reopening the Leamside Line be further developed. In terms of next steps, it is recommended that further contact is made with Nissan Motor UK (NMUK) and the Port of Tyne to ensure that both of these significant businesses are able to engage fully in this process. It may prove useful to have private sector advocates and supporters. The ‘Low Cost’ options should also be taken forward for further development and analysis. This should include further analysis of wider economic benefits.
5.3 **Port of Tyne**

In view of the proposed clean burn Power Station at Blyth, (Northumberland) the Port of Tyne will be a strategic point for importing increasing tonnages of coal. Additional rail paths will be required for the transportation of the coal by rail and alternative routes will need to be made available, providing connectivity to the Blyth and Tyne line.

There are proposals to increase the capacity of Nissan and develop the site. If this happens increased output would impact on the road infrastructure. The opening of the Leamside line would enable the distribution of the cars, not only to the rest of the country on the existing rail infrastructure, but to the Port of Tyne for export.

The Network Rail RUS confirmed that the Boldon East Curve should be opened up, allowing trains from the port direct access to the Durham coast line in the direction of the Tees Valley, Northallerton and the ECML. As of September 2008 there were no publically available timescales available for the reinstatement of the curve. Subsequent enquiries to Network Rail show that they are aiming to complete the work in 2011. Nexus are in agreement that the curve should be reinstated but have concerns regarding the possibility of it interfering with the Metro line at Pelaw, potentially delaying the trains to South Tyneside.

In August 2008 the link between the Port of Tyne and the ECML was upgraded in gauge to allow the effective transportation of 9' 6” cube containers. The link (connecting at Gateshead) provides easier access to the ECML, ensuring a healthy future for the industry which is forecasted to grow over the coming years.

5.4 **Ashington, Blyth and Tyne Line**

As mentioned previously, the line is fully maintained to a standard use by heavy haul trains. If the Blyth Power Station proposal becomes a reality then coal could be supplied from the North Harbour at Blyth. Due to capacity restrictions at the Port of Blyth, the coal will need to be shipped in from other ports such Hunterston in Scotland and closer links with the Port of Tyne will be required.

To enable this line to reach its full potential, additional rail paths would be required. The line from Benton to Newsham would require extra lines installed to make it double track. Newcastle City Council, Northumberland County Council, Network Rail and other partners are in discussions as to the economics outcomes and benefits of such a venture, which would provide increased connectivity for the whole of South East Northumberland.
5.5 Overall Conclusion

Rail freight can play a significant role in reducing lorry miles and the overall carbon footprint. A number of schemes in the region have been identified which can contribute to this, but the schemes are required to compete for finite resources.

At a local level there are three schemes that would expand the network appropriately and which already have the backing of the local authorities, Nexus, One North East and North East Regional Assembly. These are the:

- Leamside Line.
- Ashington Blyth and Tyne (ABT) line, and
- Re-instatement of the Boldon East Curve.

The Leamside line would provide an alternative route from the ECML in periods of congestion, and will extend to the industrial areas of Washington and East Gateshead to allow modal shift from road to rail. It would also provide connectivity for passengers to Newcastle and Durham through Houghton le Spring and Washington. The Network Rail Freight Utilisation Strategy (RUS) states that the projected increase in traffic does not currently give a strong enough case for re-instatement. However, if all other factors are taken into account, such the forecasted increase in coal and container traffic from the Port of Tyne, the possible mode shift by industries in Washington forecast increase in passenger traffic and use of line as an ECML diversionary route, then the business case could be improved.

In the case of the ABT line, there are currently a number of rail paths in use by the Alcan Smelter and open cast coal mines. The upgrade from Newcastle to Blyth will include opening up sections of the line from single to double track, but is heavily dependent on the opening of the proposed Blyth Power Station, which will be coal fired. Approximately 40% of the coal supply to the power station will come from the Port of Blyth - the remainder will be supplied through Hunterston Port via Mossend in Scotland and the Port of Tyne subsequently increasing the number of paths needed on the line. The Regional Funding Advice (RFA) has proposed a scheme to further upgrade the line from Blyth at a cost of £35m named the “South East Northumberland Public Transport Corridor”. The upgrade will consider passenger traffic from Newcastle up to Ashington. As the project is included in the advice, it means the region will look at various ways of taking it forward.

The Boldon East Curve was identified in the Network Rail Freight RUS as having a business case to re-open to assist the increase demand from the Port of Tyne for additional rail paths. Network Rail indicated that the latest projected completion date is 2011.

5.6 The Way Forward

Pressure is increasing for additional rail paths in the North East, together with enhanced loading gauge. Organisations are currently campaigning to government for the necessary injection of funding to enable the infrastructure to be upgraded. It is considered that there is a particular role for the Partnership in pressing the case for schemes such as the Leamside Line, Blyth and Tyne line and improvements to access to the Port of Tyne.

The Partnership will focus more on rail freight issues in future tasks and establish closer links with Network Rail and the rail freight operating companies. It is also considered necessary to liaise closely with Northumberland County Council, Durham County Council and Newcastle City Council.